

CLAIMS

What is Claimed is:

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1. A method for representing an application programming interface (API) definition for
5 an object-oriented library, said method comprising:
creating a list of public elements in said library, each of said public elements including
a sublist of all public related elements for the element; and
storing said list.

10 2. The method of claim 1 wherein
said library is a Java™ package;
said public elements comprise classes and interfaces; and
said public related elements comprise public superclasses and public superinterfaces
of said classes and said interfaces.

15 3. A method for representing an application programming interface (API) definition for
an object-oriented library, said method comprising:
creating a public list including all public classes and interfaces in defined in said
library, said public list including a class sublist for each of said public classes,
20 each said class sublist including all direct and indirect superclasses of a class, said
public list including an interface sublist for each of said public interfaces, each

said interface sublist including all direct and indirect public superinterfaces of an interface; and
storing said list.

5 4. The method of claim 3 wherein said library is a Java™ package.

5. A method for determining a program hierarchy, said method comprising:

receiving an application programming interface (API) definition file for an object-

oriented library, said API definition file including a list of public elements in said library, each of said public elements including a sublist of all public related elements for the element; and

indicating a first public element is a direct parent of a second public element when

said first public element is represented in the sublist for said second public element and said first public element is not represented in the sublist for any other public element listed in the sublist for said second public element.

6. The method of claim 5 wherein

said library is a Java™ package;

said public elements comprise classes and interfaces; and

20 said public related elements comprise public superclasses and public superinterfaces
of said classes and said interfaces.

7. The method of claim 5, further comprising
comparing a first program hierarchy reconstructed from a first API definition file with
a second program hierarchy reconstructed from a second API definition file; and
5 indicating an error when said first program hierarchy is inconsistent with said second
program hierarchy.

8. A program storage device readable by a machine, embodying a program of
instructions executable by the machine to perform a method to represent an
application programming interface (API) definition for an object-oriented library, the
method comprising:
creating a list of public elements in said library, each of said public elements including
a sublist of all public related elements for the element; and
storing said list.

9. The program storage device of claim 7 wherein
said library is a Java™ package;
said public elements comprise classes and interfaces; and
said public related elements comprise public superclasses and public superinterfaces
20 of said classes and said interfaces.

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10. A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method to represent an application programming interface (API) definition for an object-oriented library, the method comprising:

5 creating a public list including all public classes and interfaces in defined in said
library, said public list including a class sublist for each of said public classes,
each said class sublist including all direct and indirect superclasses of a class, said
public list including an interface sublist for each of said public interfaces, each
said interface sublist including all direct and indirect public superinterfaces of an
interface; and
storing said list.

11. The program storage device of claim 9 wherein said library is a Java™ package.

15 12. A program storage device readable by a machine, embodying a program of
instructions executable by the machine to perform a method to determine a program
hierarchy, the method comprising:
receiving an application programming interface (API) definition file for an object-
oriented library, said API definition file including a list of public elements in said
library, each of said public elements including a sublist of all public related
elements for the element; and

indicating a first public element is a direct parent of a second public element when
said first public element is represented in the sublist for said second public
element and said first public element is not represented in the sublist for any other
public element listed in the sublist for said second public element.

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13. The program storage device of claim 11 wherein

 said library is a Java™ package;
 said public elements comprise classes and interfaces; and
 said public related elements comprise public superclasses and public superinterfaces
 of said classes and said interfaces.

14. The program storage device of claim 12, further comprising

 comparing a first program hierarchy reconstructed from a first API definition file with
 a second program hierarchy reconstructed from a second API definition file; and
 indicating an error when said first program hierarchy is inconsistent with said second
 program hierarchy.